

Turner

P#12

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/181,311

DATE: 02/22/2000  
TIME: 15:31:48

Input Set: **RECEIVED** 11.RAW

NOV 01 2000

This Raw Listing contains the General Information  
Section and up to first 5 pages.

**ENTERED** REC'D 11/01/2000

1 <110> APPLICANT: Lee, Arthur M.E.  
2 Jain, Mukesh  
3 Watanabe, Masafumi  
4 <120> TITLE OF INVENTION: IN VITRO DIFFERENTIATION OF VASCULAR SMOOTH MUSCLE  
5 CELLS AND REAGENTS RELATED THERETO  
6 <130> FILE REFERENCE: APV-382.01  
7 <140> CURRENT APPLICATION NUMBER: US/09/181,311  
8 <141> CURRENT FILING DATE: 1998-10-28  
9 <150> EARLIER APPLICATION NUMBER: 60/063,363  
10 <151> EARLIER FILING DATE: 1997-10-28  
11 <150> EARLIER APPLICATION NUMBER: 60/080,420  
12 <151> EARLIER FILING DATE: 1998-04-02  
13 <150> EARLIER APPLICATION NUMBER: 60/096,685  
14 <151> EARLIER FILING DATE: 1998-08-14  
15 <160> NUMBER OF SEQ ID NOS: 23  
16 <170> SOFTWARE: PatentIn Ver. 2.0  
17 <210> SEQ ID NO 1  
18 <211> LENGTH: 153  
19 <212> TYPE: DNA  
20 <213> ORGANISM: Murine  
21 <220> FEATURE:  
22 <223> OTHER INFORMATION: Clone WO11  
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25 gccgatgaga accaggagta cagccccatg actgggcagt gtcgctctcg ggtcacggaa 120  
26 gattcaggtg tggatcgtca gcctaggcga aga 153  
27 <210> SEQ ID NO 2  
28 <211> LENGTH: 143  
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38 <211> LENGTH: 1128  
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40 <213> ORGANISM: Homo sapiens  
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45 1 5 10 15  
 46 Leu Ala Leu Cys Pro Gly Gly Arg Pro Gln Thr Val Leu Thr Asp Asp  
 47 20 25 30  
 48 Glu Ile Glu Glu Phe Leu Glu Gly Phe Leu Ser Glu Leu Glu Pro Glu  
 49 35 40 45  
 50 Pro Arg Glu Asp Asp Val Glu Ala Pro Pro Pro Pro Glu Pro Thr Pro  
 51 50 55 60  
 52 Arg Val Arg Lys Ala Gln Ala Gly Gly Lys Pro Gly Pro Gly Thr Ala  
 53 65 70 75 80  
 54 Ala Glu Val Pro Pro Glu Lys Thr Lys Asp Lys Gly Lys Lys Gly Lys  
 55 85 90 95  
 56 Lys Asp Lys Gly Pro Lys Val Pro Lys Glu Ser Leu Glu Gly Ser Pro  
 57 100 105 110  
 58 Arg Pro Pro Lys Lys Gly Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys  
 59 115 120 125  
 60 Pro Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys Pro Lys Glu Glu Pro  
 61 130 135 140  
 62 Pro Lys Ala Thr Lys Pro Lys Glu Lys Lys Ala Thr Lys Lys Pro  
 63 145 150 155 160  
 64 Pro Ser Gly Lys Arg Pro Pro Ile Leu Ala Pro Ser Glu Thr Leu Glu  
 65 165 170 175  
 66 Trp Pro Leu Pro Pro Pro Ser Pro Gly Pro Glu Glu Leu Pro Gln  
 67 180 185 190  
 68 Glu Gly Gly Ala Pro Leu Ser Asn Asn Trp Gln Asn Pro Gly Glu Glu  
 69 195 200 205  
 70 Thr His Val Glu Ala Gln Glu His Gln Pro Glu Pro Glu Glu Thr  
 71 210 215 220  
 72 Glu Gln Pro Thr Leu Asp Tyr Asn Ile Glu Arg Glu Asp Tyr Glu Asp  
 73 225 230 235 240  
 74 Phe Glu Tyr Ile Arg, Arg Gln Lys Gln Pro Arg Pro Pro Ser Arg  
 75 245 250 255  
 76 Arg Arg Arg Pro Glu Arg Val Trp Pro Glu Pro Pro Glu Glu Lys Ala  
 77 260 265 270  
 78 Pro Ala Pro Ala Pro Glu Glu Arg Ile Glu Pro Pro Val Lys Pro Leu  
 79 275 280 285  
 80 Leu Pro Pro Leu Pro Pro Asp Tyr Gly Asp Gly Tyr Val Ile Pro Asn  
 81 290 295 300  
 82 Tyr Asp Asp Met Asp Tyr Gly Pro Pro Pro Pro Gln Lys Pro Asp Ala  
 83 305 310 315 320  
 84 Glu Arg Gln Thr Asp Glu Glu Lys Glu Glu Leu Lys Lys Pro Lys Lys  
 85 325 330 335  
 86 Glu Asp Ser Ser Pro Lys Glu Glu Thr Asp Lys Trp Ala Val Glu Lys  
 87 340 345 350  
 88 Gly Lys Asp His Lys Glu Pro Arg Lys Gly Glu Glu Leu Glu Glu Glu  
 89 355 360 365  
 90 Trp Thr Pro Thr Glu Lys Val Lys Cys Pro Pro Ile Gly Met Glu Ser  
 91 370 375 380  
 92 His Arg Ile Asn Gln Ile Arg Ala Ser Ser Met Leu Arg His Gly Leu  
 93 385 390 395 400  
 94 Gly Ala Gln Arg Gly Arg Leu Asn Met Gln Thr Gly Ala Thr Glu Asp

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97	420	425	430
98	Trp Ile Glu Val Asp Thr Arg Arg Thr Thr Arg Phe Thr Gly Val Ile		
99	435	440	445
100	Thr Gln Gly Arg Asp Ser Ser Ile His Asp Asp Phe Val Thr Thr Phe		
101	450	455	460
102	Phe Phe Ser Asn Asp Ser Gln Thr Trp Val Met Tyr Thr Asn Gly Tyr		
103	465	470	475
104	Glu Glu Met Thr Phe His Gly Asn Val Asp Lys Asp Thr Pro Val Leu		
105	485	490	495
106	Ser Glu Leu Pro Glu Pro Val Val Ala Arg Phe Ile Arg Ile Tyr Pro		
107	500	505	510
108	Leu Thr Trp Asn Gly Ser Leu Cys Met Arg Leu Glu Val Leu Gly Cys		
109	515	520	525
110	Ser Val Ala Pro Val Tyr Ser Tyr Tyr Ala Gln Asn Glu Val Val Asp		
111	530	535	540
112	Asp Leu Asp Phe Arg His His Ser Tyr Lys Asp Met Arg Gln Leu Met		
113	545	550	555
114	Lys Val Val Asn Glu Glu Cys Pro Thr Ile Thr Arg Thr Tyr Ser Leu		
115	565	570	575
116	Gly Lys Ser Ser Arg Gly Leu Lys Ile Tyr Ala Met Glu Ile Ser Asp		
117	580	585	590
118	Asn Pro Gly Glu His Glu Leu Gly Glu Pro Glu Phe Arg Tyr Thr Ala		
119	595	600	605
120	Gly Ile His Gly Asn Glu Val Leu Gly Arg Glu Leu Ile Leu Met Gln		
121	610	615	620
122	Tyr Leu Cys Arg Glu Tyr Arg Asp Gly Asn Pro Arg Val Arg Ser Leu		
123	625	630	635
124	Val Gln Asp Thr Arg Ile His Leu Val Pro Ser Leu Asn Pro Asp Gly		
125	645	650	655
126	Tyr Glu Val Ala Ala Gln Met Gly Ser Glu Phe Gly Asn Trp Ala Leu		
127	660	665	670
128	Gly Leu Trp Thr Glu Glu Gly Phe Asp Ile Phe Glu Asp Phe Pro Asp		
129	675	680	685
130	Leu Asn Ser Val Leu Trp Gly Ala Glu Glu Phe Val Pro Tyr Arg Val		
131	690	695	700
132	Pro Asn Asn Asn Leu Pro Ile Pro Glu Arg Tyr Leu Ser Pro Asp Ala		
133	705	710	715
134	Thr Val Ser Thr Glu Val Arg Ala Ile Ile Ala Trp Met Glu Lys Asn		
135	725	730	735
136	Pro Phe Val Leu Gly Ala Asn Leu Asn Gly Gly Glu Arg Leu Val Ser		
137	740	745	750
138	Tyr Pro Tyr Asp Met Ala Arg Thr Pro Thr Gln Glu Gln Leu Leu Ala		
139	755	760	765
140	Ala Ala Met Ala Ala Ala Glu Gly Glu Asp Glu Val Ser Glu Ala Gln		
141	770	775	780
142	Glu Thr Pro Asp His Ala Ile Phe Arg Trp Leu Ala Ile Ser Phe Ala		
143	785	790	795
144	Ser Ala His Leu Thr Leu Thr Glu Pro Tyr Arg Gly Gly Cys Gln Ala		800

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146	Gln Asp Tyr Thr Gly Gly Met Gly Ile Val Asn Gly Ala Lys Trp Asn		
147	820	825	830
148	Pro Arg Thr Gly Thr Ile Asn Asp Phe Ser Tyr Leu His Thr Asn Cys		
149	835	840	845
150	Leu Glu Leu Ser Phe Tyr Ile Asp Lys Phe Pro His Glu Ser Glu Leu		
151	850	855	860
152	Pro Arg Glu Trp Glu Asn Asn Lys Glu Ala Leu Leu Thr Phe Met Glu		
153	865	870	875
154	880		
155	Gln Val His Arg Gly Ile Lys Gly Val Val Thr Asp Glu Gln Gly Ile		
156	885	890	895
157	Pro Ile Ala Asn Ala Thr Ile Ser Val Ser Gly Ile Asn His Gly Val		
158	900	905	910
159	Lys Thr Ala Ser Gly Gly Asp Tyr Trp Arg Ile Leu Asn Pro Gly Glu		
160	915	920	925
161	Tyr Arg Val Thr Ala Glu Gly Tyr Thr Pro Ser Ala Lys Thr Cys Asn		
162	930	935	940
163	Val Asp Tyr Asp Ile Gly Ala Thr Gln Cys Asn Phe Ile Leu Ala Arg		
164	945	950	955
165	960		
166	Ser Asn Trp Lys Arg Ile Arg Glu Ile Met Ala Met Asn Gly Asn Arg		
167	965	970	975
168	Pro Ile Pro His Ile Asp Pro Ser Arg Pro Met Thr Pro Gln Gln Arg		
169	980	985	990
170	Arg Leu Gln Gln Arg Arg Leu Gln His Arg Leu Arg Leu Arg Ala Gln		
171	995	1000	1005
172	Met Arg Leu Asn Ala Thr Thr Leu Gly Pro His Thr Val Pro Pro		
173	1010	1015	1020
174	Thr Leu Pro Pro Ala Pro Ala Thr Thr Leu Ser Thr Thr Ile Glu Pro		
175	1025	1030	1035
176	1040		
177	Trp Gly Leu Ile Pro Pro Thr Thr Ala Gly Trp Glu Glu Ser Glu Thr		
178	1045	1050	1055
179	Glu Thr Tyr Thr Glu Val Val Thr Glu Phe Gly Thr Glu Val Glu Pro		
180	1060	1065	1070
181	Glu Phe Gly Thr Lys Val Glu Pro Glu Phe Glu Thr Gln Leu Phe Glu		
182	1075	1080	1085
183	Thr Gln Leu Glu Pro Glu Phe Glu Glu Glu Glu Glu Lys Glu		
184	1090	1095	1100
185	Glu Glu Ile Ala Thr Gly Gln Ala Phe Pro Phe Thr Thr Val Glu Thr		
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195 Leu Thr Leu Cys Pro Glu Gly Asn Pro Gln Thr Val Leu Thr Asp Asp  
 196 20 25 30  
 197 Glu Ile Glu Glu Phe Leu Glu Gly Phe Leu Ser Glu Leu Glu Thr Gln  
 198 35 40 45  
 199 Ser Pro Pro Arg Glu Asp Asp Val Glu Val Gln Pro Leu Pro Glu Pro  
 200 50 55 60  
 201 Thr Gln Arg Pro Arg Lys Ser Lys Ala Gly Gly Lys Gln Arg Ala Asp  
 202 65 70 75 80  
 203 Val Glu Val Pro Pro Glu Lys Asn Lys Asp Lys Glu Lys Lys Gly Lys  
 204 85 90 95  
 205 Lys Asp Lys Gly Pro Lys Ala Thr Lys Pro Leu Glu Gly Ser Thr Arg  
 206 100 105 110  
 207 Pro Thr Lys Lys Pro Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys Pro  
 208 115 120 125  
 209 Lys Glu Lys Pro Pro Lys Ala Thr Lys Lys Pro Lys Glu Lys Pro Pro  
 210 130 135 140  
 211 Lys Ala Thr Lys Lys Pro Lys Glu Lys Lys Ala Thr Lys Arg Pro Ser  
 212 145 150 155 160  
 213 Ala Gly Lys Lys Phe Ser Thr Val Ala Pro Leu Glu Thr Leu Asp Arg  
 214 165 170 175  
 215 Leu Leu Pro Ser Pro Ser Asn Pro Ser Ala Gln Glu Leu Pro Gln Lys  
 216 180 185 190  
 217 Arg Asp Thr Pro Phe Pro Asn Ala Trp Gln Gly Gln Gly Glu Glu Thr  
 218 195 200 205  
 219 Gln Val Glu Ala Lys Gln Pro Arg Pro Glu Pro Glu Glu Glu Thr Glu  
 220 210 215 220  
 221 Met Pro Thr Leu Asp Tyr Asn Ile Glu Lys Glu Asp Tyr Glu Asp Phe  
 222 225 230 235 240  
 223 Glu Tyr Ile Arg Arg Gln Lys Gln Pro Arg Pro Thr Pro Ser Arg Arg  
 224 245 250 255  
 225 Arg Leu Trp Pro Glu Arg Pro Glu Glu Lys Thr Glu Glu Pro Glu Glu  
 226 260 265 270  
 227 Arg Lys Glu Val Glu Pro Pro Leu Lys Pro Leu Leu Pro Pro Asp Tyr  
 228 275 280 285  
 229 Gly Asp Ser Tyr Val Ile Pro Asn Tyr Asp Asp Leu Asp Tyr Pro His  
 230 290 295 300  
 231 Pro Pro Pro Gln Lys Pro Asp Val Gly Gln Glu Val Asp Glu Glu Lys  
 232 305 310 315 320  
 233 Glu Glu Met Lys Lys Pro Lys Lys Glu Gly Ser Ser Pro Lys Glu Asp  
 234 325 330 335  
 235 Thr Glu Asp Lys Trp Thr Val Glu Lys Asn Lys Asp His Lys Gly Pro  
 236 340 345 350  
 237 Arg Lys Gly Glu Glu Leu Glu Glu Trp Ala Pro Val Glu Lys Ile  
 238 355 360 365  
 239 Lys Cys Pro Pro Ile Gly Met Glu Ser His Arg Ile Asn Gln Ile Arg  
 240 370 375 380  
 241 Ala Ser Ser Met Leu Arg His Gly Leu Gly Ala Gln Arg Gly Arg Leu  
 242 385 390 395 400  
 243 Asn Met Gln Ala Gly Ala Asn Glu Asp Asp Tyr Tyr Asp Gly Ala Trp  
 244 405 410 415

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**VERIFICATION SUMMARY**  
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Line ? Error/Warning

Original Text